

LISTING OF CLAIMS

1 (Previously presented) A method of manufacturing an annular member from a disc-shaped metal sheet material defining an outer periphery, comprising the steps of:

forming the disc-shaped metal sheet to have a non-processed portion including the outer periphery and a stepped portion defined by an inclined wall, and an inner swelling portion connected to the outer periphery by the stepped portion, the outer periphery and the swelling portion lying in different planes;

rotating the disc-shaped metal material;

pressing the outer periphery of the metal sheet material in a radially inward direction, while continuing to rotate the metal sheet material;

thickening the outer periphery axially and without buckling by said pressing;

protruding the outer periphery to either side of the non-processed portion of the metal sheet material; and

forming a peripheral wall protruding to either side of the non-processed portion.

2. (Previously presented) The method of manufacturing an annular member according to claim 1, wherein, in an intermediate phase of the step of thickening the outer periphery of the metal sheet material axially, a preliminary peripheral wall is formed so that the outer periphery may have an axial center portion which is more outwardly swelled than both axial ends, so as to be arc-shaped.

3. (Previously presented) The method of manufacturing an annular member according to claim 2, wherein, in advance of forming the preliminary peripheral wall, the outer periphery of the metal sheet material is formed so that

a sectional face thereof may have a substantially circular shape.

4. (Previously presented) The method of manufacturing an annular member according to claim 1, further comprising the steps of:

holding the non-processed portion of the metal sheet material between a pair of dies;

producing said rotation of the metal sheet material with the dies;

producing said pressing by a forming surface of a forming roller against the outer periphery of the metal sheet material; and

rotating the forming roller together with the metal sheet material.

5. (Previously presented) The method of manufacturing an annular member according to claim 4, wherein, in an intermediate phase of the step of thickening the outer periphery of the metal sheet material axially, a preliminary peripheral wall is formed so that the outer periphery may have an axial center portion which is more outwardly swelled than both axial ends, so as to be arc-shaped.

6. (Previously presented) The method of manufacturing an annular member according to claim 5, further comprising the step of: finishing the preliminary peripheral wall protruding the either side of the non-processed portion in a predetermined shape.

7. (Cancelled)

8. (Original) The method of manufacturing an annular member according to claim 1, wherein the stepped portion is formed before said pressing step.

9. (Previously presented) The method of manufacturing an annular member from a disc-shaped metal sheet material as defined in claim 1, the disc-shaped metal sheet defining an axis of symmetry, the method further comprising the step of:
extending the swelling portion to the axis of symmetry.